From: McMillan, Teresa
To: Coltrain, Katrina
Subject: RE: Wilcox SAP COPCs
Date: Thursday, March 31, 2016 10:46:57 AM

Ok

Teri McMillan, PG
EA Engineering, Science, and Technology, Inc., PBC
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From: Coltrain, Katrina [mailto:coltrain.katrina@epa.gov]
Sent: Thursday, March 31, 2016 9:45 AM
To: McMillan, Teresa <tmcmillan@eaest.com>
Cc: Radu, Cristina <cradu@eaest.com>
Subject: RE: Wilcox SAP COPCs

For Houston/CLP, using ICP-MS ISM02.2 gets us lower detection limits for all metals in the list except for those listed. The lower detection limits are more desirable. Since, the Al, Ca, Fe, Mg are not part of ICP-MS we will need to include them under AES ISM02.2.

Katrina Higgins-Coltrain
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From: McMillan, Teresa [mailto:tmcmillan@eaest.com]
Sent: Thursday, March 31, 2016 10:40 AM
To: Coltrain, Katrina <coltrain.katrina@epa.gov>
Cc: cradu@eaest.com
Subject: RE: Wilcox SAP COPCs

Thanks - those four you have are on the list for the ICP-MS method - so we should be good to go. We will run the full list.

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From: Coltrain, Katrina [mailto:coltrain.katrina@epa.gov]
Sent: Thursday, March 31, 2016 9:36 AM
To: McMillan, Teresa <tmcmillan@eaest.com>
Subject: RE: Wilcox SAP COPCs

Apologies for the confusion. That is intended to mean analysis for the TAL metals list plus those in parentheses.

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From: McMillan, Teresa [mailto:tmcmillan@eaest.com]
Sent: Wednesday, March 30, 2016 10:54 AM
To: Coltrain, Katrina <coltrain.katrina@epa.gov>
Subject: RE: Wilcox SAP COPCs

Katrina,

Regarding the Metals list - we definitely need lead. Do you not want to run the full list?

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From: Coltrain, Katrina [mailto:coltrain.katrina@epa.gov]
Sent: Tuesday, March 29, 2016 3:53 PM
To: McMillan, Teresa <tmcmillan@eaest.com>
Subject: RE: Wilcox SAP COPCs

Teri, please see some of my adjustments.

Soil:
VOCs
EDB - Method 8011 – need low detection limit
PAHs (SIM)
SVOCs
TAL metals (Al, Ca, Fe, Mg)
Mercury, and
Cyanide.

pH has a very short holding time. Can this be collected in the field?

This seems a bit much for NORM. Do we need this level of investigation? Perhaps, phase 1 involves some screen to see if more is needed as outlined below.

Analysis for NORM/TENORM is anticipated to be performed on soil, surface water, sediment, ground water, and waste. NORM/TENORM analyses include the following:
Soil: Gamma spectroscopy NORM, gross alpha/beta, total uranium, and total thorium.
Water: gamma spectroscopy (radium-226/228), gross alpha/beta, total uranium, and total thorium.

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Sent: Tuesday, March 29, 2016 4:16 PM
To: Coltrain, Katrina <coltrain.katrina@epa.gov>
Subject: FW: Wilcox SAP COPCs

Here you go.

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From: Radu, Cristina
Sent: Tuesday, March 29, 2016 12:53 PM
To: Vega, Luis <lvega@eaest.com>
Cc: McMillan, Teresa <tmcmillan@eaest.com>; Moss, Pamela <pmoss@eaest.com>; Stroup, Jason <jstroup@eaest.com>
Subject: RE: Wilcox SAP COPCs

Here is what I have in the SAP:

The current COPCs at the site are as follows:

1. VOCs

EDB - Method 8011 – need low detection limit
PAHs
SVOCs
TAL metals
Mercury, and
Cyanide.

In addition, a select number of soil samples in the process areas (5 percent) of the shallow surface soil samples (0.0-0.6 ft bgs) will also be analyzed for:
PCB
Pesticides
Dioxins/furans.

Moreover, a limited number of shallow soil samples (0.0 to 0.5 ft bgs), surface water, sediment, ground water, and waste will also be analyzed for NORM/TENORM.

The COPCs for the site will be initially applied conservatively to all media across the investigation, as the set of COPCs cannot be refined until source characterization has been completed.
Additional testing will be performed, as follows:
Surface water:
Dissolved metals
pH
Hardness
Total dissolved solids (TDS)
Total suspended solids (TSS)
Alkalinity
Organic carbon
Acid volatile sulfide (AVS)
Sediment samples:
Grain size (20 percent of samples)
Total organic carbon
pH

The samples associated with Source No. 1, the Cooling Pond, will also be analyzed for hexavalent chromium.

Analysis for NORM/TENORM is anticipated to be performed on soil, surface water, sediment, ground water, and waste. NORM/TENORM analyses include the following:
Soil: Gamma spectroscopy NORM, gross alpha/beta, total uranium, and total thorium.
Water: gamma spectroscopy (radium-226/228), gross alpha/beta, total uranium, and total thorium.

Cristina Radu
Cell: 505/681.6894